

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/052845 A1

(51) International Patent Classification⁷: **C07C 275/32**,
275/40, C07D 295/12, 207/26, 211/62, 211/22, 211/46,
A61K 31/17, 31/395, A61P 13/00, 29/00

Saganakadai, Kizu-cho, Soraku-gun, Kyoto 619-0223
(JP). **MORIWAKI, Toshiya** [JP/JP]; 2-25-4, Kitayamato,
Ikoma-shi, Nara 630-0121 (JP).

(21) International Application Number:
PCT/EP2003/013452

(74) Common Representative: **BAYER HEALTHCARE**
AG; Law and Patents, Patents and Licensing, 51368
Leverkusen (DE).

(22) International Filing Date:
28 November 2003 (28.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02027528.5 9 December 2002 (09.12.2002) EP

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,
CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,
SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*): **BAYER**
HEALTHCARE AG [DE/DE]; 51368 Leverkusen (DE).

(84) Designated States (*regional*): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **TAJIMI, Masaomi**
[JP/JP]; 1-8-17 Sakuragaoka, Seika-cho, Soraku-gun, Ky-
oto 619-0232 (JP). **KOKUBO, Toshio** [JP/JP]; 3-15-18B,
Jingu, Nara-shi, Nara 631-0804 (JP). **SHIROO, Masahiro**
[JP/JP]; 1-3-17, Shikanodai-Minami, Ikoma-shi, Nara
630-0113 (JP). **TSUKIMI, Yasuhiro** [JP/JP]; 2-10-1,
Kukuchi, Amagasaki-shi, Hyogo 661-0977 (JP). **YURA,**
Takeshi [JP/JP]; 1-1-17-101, Saidaiji-Nogami-cho,
Nara-shi, Nara 631-0833 (JP). **URBAHNS, Klaus**
[DE/JP]; 6-3-1-301, Kusugaoka-cho, Nada-ku, Kobe-shi,
Hyogo 657-0024 (JP). **YAMAMOTO, Noriyuki** [JP/JP];
6-6-1-3-404, Jingu, Nara-shi, Nara 631-0804 (JP).
MOGI, Muneto [JP/JP]; 5-10-57-102, Daianji, Nara-shi,
Nara 630-8133 (JP). **FUJISHIMA, Hiroshi** [JP/JP];
3-23-25, Sakyo, Nara-shi, Nara 631-0801 (JP). **MASUDA,**
Tsutomu [JP/JP]; 3-15-6-6A, Jingu, Nara-shi, Nara
631-0804 (JP). **YOSHIDA, Nagahiro** [JP/JP]; 5-18-15,

Published:

— with international search report

(48) Date of publication of this corrected version:

9 June 2005

(15) Information about Correction:

see PCT Gazette No. 23/2005 of 9 June 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TETRAHYDRO-NAPHTHALENE DERIVATIVES AS VANILLOID RECEPTOR ANTAGONISTS

(57) Abstract: This invention relates to tetrahydro-naphthalene derivatives and salts thereof which is useful as an active ingredient of pharmaceutical preparations. The tetrahydro-naphthalene derivatives of the present invention have an excellent activity as VR1 antagonist and useful for the prophylaxis and treatment of diseases associated with VR1 activity, in particular for the treatment of urinary incontinence, urge urinary incontinence, overactive bladder, chronic pain, neuropathic pain, postoperative pain, rheumatoid arthritic pain, neuralgia, neuropathies, algesia, nerve injury, ischaemia, neurodegeneration, stroke, inflammatory disorders, asthma and COPD.

WO 2004/052845 A1

10-537217

International Application No
PCT/EP 03/13452

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/13452

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00 50387 A (KIM HEE DOO ;OH UHTAEK (KR); PARK YOUNG HO (KR); SUH YOUNG GER (KR) 31 August 2000 (2000-08-31) cited in the application claims	1-21
P,X	WO 03 095420 A (BAYER AG ;FUJISHIMA HIROSHI (JP); YAMAMOTO NORIYUKI (JP); KOKUBO T) 20 November 2003 (2003-11-20) page 8 -page 16; claims	1-3,5-21

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/13452

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 19-21 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/13452

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02072536	A	19-09-2002	EP 1366020 A1 WO 02072536 A1	03-12-2003 19-09-2002
WO 0075106	A	14-12-2000	US 6294694 B1 AU 3929600 A WO 0075106 A2 US 2002032347 A1	25-09-2001 28-12-2000 14-12-2000 14-03-2002
WO 0055152	A	21-09-2000	CA 2361998 A1 EP 1163236 A1 JP 2002539206 T WO 0055152 A1 US 6297381 B1 US 6476023 B1	21-09-2000 19-12-2001 19-11-2002 21-09-2000 02-10-2001 05-11-2002
WO 0050387	A	31-08-2000	AU 763824 B2 AU 2697600 A CA 2363531 A1 CN 1342138 T EP 1154989 A1 JP 2002537373 A WO 0050387 A1 KR 2001014495 A US 6476076 B1	31-07-2003 14-09-2000 31-08-2000 27-03-2002 21-11-2001 05-11-2002 31-08-2000 26-02-2001 05-11-2002
WO 03095420	A	20-11-2003	WO 03095420 A1	20-11-2003